



ACF-10

Acoustical Flow Sensor for Solids

- Acoustic noise sensor for equipment maintenance requirements and solid flow sensing in pipes
- Works in audible sound frequencies of 8 to 16 kHz
- Easy to install: strap or screw to pipe or bearing
- Self-contained with 24 to 240 VAC or VDC power and 1 SPST relay output
- Offset, gain and time delay adjustments with (4) LED indicators

■ Operational Description

The ACF-10 is a self-contained acoustical sensor that detects the audible noise made by powders or grains in a pipe or conveyor. It may also be used to detect audible noise on mechanical equipment for preventive maintenance.

The solid state sensor detects acoustical vibrations by means of a sound pickup. If the audible vibrations exceed a predetermined limit, a relay output occurs. Because sound is transmitted very effectively by a metal or plastic pipe, this is especially suitable for pneumatic conveying. A lack of sound indicates a plugged pipe.

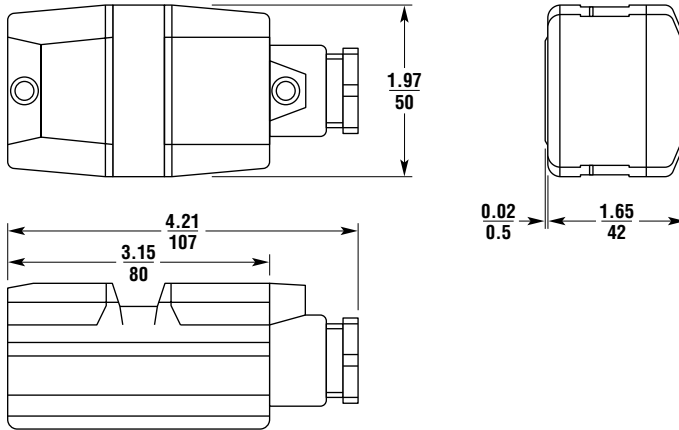
■ Applications

The ACF-10 works best in granular and powdered materials that are hard. The rattling of conveyed material on the pipe wall will convey audible noise through the pipe wall to the transducer. The ACF-10 can also be affixed to motor or machine bearings and can be adjusted to provide an alarm when excessive noise from the bearing occurs. Calibration will require an audible noise source comparable to a faulty bearing.

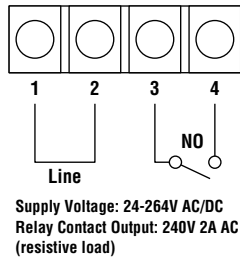
■ Specifications

Performance
Operation Characteristics
Sensitivity Adjustment: By offset and gain trim potentiometers
Operation Indication: (4) LEDs (Red - detection of noise. Four red - relay will trip)
Alarm Output: Relay contact rating: 240 V 2 A AC; 30 V 2 A DC (resistive)
Electrical
Supply Voltage: 22 VDC to 264 VAC inclusive (50/60 Hz AC) Withstand Voltage 1500 VAC for 1 min. (between line and output) Insulation Resistance 500 VDC, 100 m ohm (between line and output)
Power Consumption: Approx. 2.5 VA (at 100 VAC)
Physical
Material: ABS, Polycarbonate PC
Mounting: (2) straps or screws
Wiring: PF1/2 cable gland
Rating: IP54/NEMA 12
Environmental
Operating Temperature Range: 14 to 158°F (-10 to 70°C)
Operational Humidity: 5 to 85% RH
Shock Resistance: 60 to 2000 Hz, 10 g
Specifications are subject to change without notice.

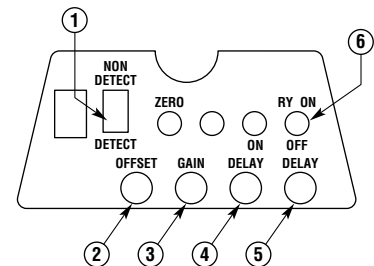
■ Dimensions — in./mm



■ Wiring



Calibration



■ Ordering Information

ACF -	
Configuration	
10	Flow Sensor, Standard Duty